

THE CLAIMS

What is claimed is:

1. A golf ball comprising:

(a) a core of two or more layers having an outer diameter of at least about 1.55 inches;

(b) a cover layer having a flex modulus of less than about 20,000 psi; and

(c) a mantle layer disposed between the core and the cover;

wherein the mantle layer comprises a non-ionomeric, thermoplastic material, having a hardness of less than 60 Shore D and a resilience of greater than 34.

2. The golf ball of claim 1, wherein the mantle layer has a thickness from about .025 inches to about .125 inches.

3. The golf ball of claim 1, wherein the core is comprised of an inner core layer and outer core layer and the inner core layer is comprised of a polybutadene rubber and organosulfer compound.

4. The golf ball of claim 1, wherein the mantle has a flex modulus of greater than about 45,000 psi.

5. The golf ball of claim 1, wherein the overall diameter of the finished ball is about 1.68 inches to about 1.80 inches.

6. A golf ball comprising:

a core of one or more layers having a compression of about 30 to 90;

a cover of one or more layers; and

a mantle layer disposed between the core layer and the cover formed from a non-ionomeric, thermoplastic elastomer and having a vicat point of greater than about 350° F and a flexural modulus of at least about 45,000 psi.

7. The golf ball of claim 6, wherein the cover is comprised of a polyurethane or polyurea based material.

8. The golf ball of claim 6, wherein the core is comprised of an inner core layer and an outer core layer.

9. The golf ball of claim 6, wherein the mantle has a Shore D hardness of at least about 60.

10. The golf ball of claim 6, wherein the mantle layer has a thickness of less than about 0.1 inch.

11. The golf ball of claim 6, wherein the core has a diameter of at least about 1.55 inches.

5 12. The golf ball of claim 10, wherein the cover layer has a flex modulus of less than about 20,000 psi.

10 13. The golf ball of claim 6, wherein the cover is comprised of an inner cover layer having a thickness of about 0.005 and 0.06 inches and an outer cover layer having a thickness of about 0.005 and 0.035.

14. The golf ball of claim 6, wherein the ball has a coefficient of restitution greater than about 0.805.

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